DOCUMENT RESUME

ED 219 788 CS 207 137

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TITLE	Effective Practices for Spelling Instruction: Literature Synthesis.
INSTITUTION	CEMREL, Inc., St. Louis, Mo.; Northwest Regional Educational Lab., Portland, Oreg.
SPONS AGENCY	National Inst. of Education (ED), Washington, DC.
PUB DATE	Jan 82
NOTE	31p.; Prepared for Title II Basic Skills Improvement, Denver County/City Public Schools.
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Computer Assisted Instruction; Educational Games; Educational Media; Educational Research; Elementary Secondary Education; *Integrated Activities; *Language Arts; Language Skills; Literature Reviews; *Spelling Instruction; *Teaching Methods
IDENTIFIERS	*Learning Strategies; Theory Practice Relationship

ABSTRACT

Because identification of effective instructional practices for building spelling skills remains a concern of those charged with guiding the development of student language arts competencies, this paper presents a synthesis of research and expert opinion on those practices that have been shown to foster spelling proficiency among both beginning spellers and older students. Following the introduction, the first section discusses the implications of language research, including phonics and spelling rules. The second section surveys research on instructional methods, particularly the integration of spelling with other language arts. This section also discusses the role of games and the use of typewriters, computers, and other aids in spelling instruction. The third section cites studies outlining those practices that research has shown to be useless or minimally useful. This is followed by a section examining the divergence between research and practice in spelling instruction. The last section contains a summary of effective spelling instruction strategies. A bibliography concludes the paper. (HTH)

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EFFECTIVE PRACTICES FOR SPELLING INSTRUCTION

Literature Synthesis

Prepared for:

Title II Basic Skills Improvement
Denver County/City Public Schools
Denver, Colorado

Dr. Jean Christensen
Project Specialist

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CS207137

This synthesis report was prepared under the direction of Jack Allen, Director of the Regional Technical Assistance Center for Title II Basic Skills. Valuable input and assistance were provided by Ann Murphy, NWREL Program Associate, who served as editorial consultant; and by Frank W. Mattas, Director, NWREL Dissemination Services Program.

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TABLE OF CONTENTS

	Page
Introduction	1
Implications of Language Research	3
Research on Instructional Methods	8
Ineffective Practices	15
Divergence Between Research and Practice	16
Summary of Effective Practices	18
Bibliography	20

Introduction

The body of literature on spelling instruction has several distinctive features. Spelling is one of the most frequently investigated areas of the curriculum (Fitzsimmons and Loomer, 1978), with the result that the information base on spelling instruction is very large. In addition to its size, this body of literature is extremely varied, owing to the fact that spelling instruction has been extensively researched and theorized about from three different points of view--that of the English language (to which the present review is confined), that of the learner, and that of classroom practice (Hodges, 1977). Moreover, unlike the research base in many topical areas, the research on effective instructional practices for building spelling proficiency is remarkably consistent, despite the fact that investigative approaches differ considerably and much of the research is now quite old (Allred, 1977).

A further attribute of the literature on spelling instruction--and one which has caused considerable distress to researchers in this area--is the "serious gap [which] appears to exist between the existing research in spelling and its application to the classroom" (Loomer, 1978). Ernest Horn (1944, 1960, 1963), Fitzgerald (1951), Petty (1962) and numerous others have asserted that it would be difficult to find a curricular area in which a greater mismatch exists betweeen research and practice than in spelling instruction. Some specific instances of this mismatch will be identified later in this paper.

The literature on spelling instruction reflects the fact that there is virtually no disagreement about the importance of developing spelling

proficiency. Hodges, in his review of instructional practices in the United States, writes that:

> The ability to spell correctly has been considered a social virtue throughout the Western world from ancient times to the present. Correct spelling is believed to be important not only for accurate written communication; it is commonly regarded by society to be an attribute of literacy. For these and other reasons, the teaching of spelling has long been an integral part of formal schooling.

Allred makes essentially the same point, with a slightly different emphasis:

> Accurate spelling is important at all levels of written composition. A writer's creativity and effectiveness are influenced greatly by spelling ability. Good spellers are able to express their thoughts on paper freely, while poor spellers are hampered in their ability to communicate in writing.

While few people question the importance of accurate spelling for written communication in all spheres of life, this high level of agreement has not resulted in a high level of spelling proficiency among society's members. Along with numerous popular articles interrogating the educational system as to "why Johnny can't read," there is considerable concern that "Johnny," even when he becomes a university student, can't spell (Kelso, 1977; Ireland, 1979).

Identification of effective instructional practices for building spelling skills, then, remains a concern of those charged with guiding the development of language arts competencies in our students. It is the intent of this paper to present a synthesis of research and expert opinion on those practices which have been shown to foster spelling proficiency among both beginning spellers and older students. Information in this paper is confined to spelling instruction in the English language, as sound-symbol relationships (and therefore strategies for teaching and learning them) differ considerably from one language to

another. The scope of the information presented does not extend to highly technical linguistic investigations nor to psychological inquiries into cognitive development and language acquisition, except as these have been related to classroom practice by the investigators. A further limitation has been imposed by the sheer volume of material on the subject of spelling instruction. It would be possible to include many more reports of well-designed research studies and conceptual efforts. However, the emergence of several fairly definite patterns from the representative sample of documents reviewed indicates that a truly exhaustive review of the literature is not required for statements about effective instructional practices to be offered with confidence. Finally, this paper does not discuss the content of specific instructional programs, except as certain of these have been examined in relationship to the research on instructional methods. It should, however, provide the reader with a set of research-based criteria to work with as specific spelling programs are being reviewed or developed.

Implications of Language Research

Historically, much of the controversy about how spelling skills should be taught has had to do with conflicting ideas about the rationality/irrationality of the English orthographic system. The degree to which English orthography is or isn't rational, systematic and predictable has been argued since before this continent was peopled by English-speaking settlers (Hodges; Williamson and Wooden, 1980; Templeton, 1979). Those who find the English spelling system rational or "rational enough" have tended to advocate instructional practices which are characterized by presenting rules to be learned, giving emphasis to phonics, and making the findings of modern linguistics research part of

the school curriculum (Hanna, et al., 1966; Nicholson and Schacter, 1979; Schwartz and Doehring, 1977, etc.). Those whose study of English spelling has led them to conclude that it is largely irrational, on the other hand, tend to favor instructional practices which emphasize whole word learning, sight methods; "incidental" learning from considerable experience with reading and writing; or, even more radically, the use of nonstandard orthographies, such as the British Initial Teaching Alphabet (ITA), as a beginning reading/spelling tool. The following are some major findings about the instructional methods emerging from these perceptions of the English spelling system.

Phonics. There is general agreement that phonics instruction should be a component of the spelling program, although this recommendation is accompanied by several qualifying notions. Among contemporary researchers and reviewers of past research efforts, most conclude that, whereas phonics has at times been viewed as the way to teach spelling, it is more prudent and useful to regard it as one of several approaches to be used together for building spelling skills. Allred's review concludes that phonics instruction should be part of the spelling program, but that it should be clearly communicated to students that this method is not altogether dependable. C. S. Beers (1980) and J. W. Beers (1980a) advocate instruction in phonics, but emphasize the importance of readiness on the part of beginning spellers to comprehend phonetic generalizations. These researchers, moreover, advocate that young children develop a strong sight vocabulary. Graham and Miller (1979) are similarly conservative in their support of phonics instruction. Some writers (e.g., Mazurkiewicz, 1978) advise against using standard phonetic instruction at all, but most writers find this method beneficial if used cautiously.

Spelling Rules. Spelling rules, as usually taught, include phonetic rules and a variety of other rules pertaining to capitalization, abbreviation, the addition of prefixes and suffixes, and so on (Graham and Miller). A great many researchers and practitioners have addressed the question of whether learning spelling rules helps students become better spellers. Assuming that children's cognitive development is advanced enough for spelling rules to be comprehensible and meaningful to them, most writers advocate that spelling instruction include the teaching of rules, although cautions are offered concerning this practice. Allred summed up the findings of several major studies with the recommendation that "only a few, widely applicable rules should be taught." This view is shared by Graham and Miller, Nicholson and Schacter and many others. Loomer's 1978 review/summary concluded that "research supports teaching pupils only those rules that apply 80% or more of the time." It appears to be more fruitful to teach the spellings of ten words with like irregularities than to teach a rule that only applies to ten words.

Research in the field of linguistics has, however, indicated that older students can benefit from studying the structure of language. While these researchers agree with previous investigators that English has a high degree of phonetic irregularity, many insist that this does not mean that English orthography is irrational (Hanna, et al.). They argue that one must go beyond the principles of phonics to discover the logic of the English spelling system. According to Williamson and Wooden, "Students should be taught that English orthography is rational and methods presented to enable them to produce correct spelling using knowledge of phonics, semantics, etymology and preference." The intent of such instruction is not limited to providing a set of rules in order

that students can become proficient spellers. Rather, it is aimed at the broader goal of giving richness and depth to students' involvement with all language arts activities, including heightening their sensitivity to literature. "The more information concerning the logic of word structure to which our students are sensitive, the more sophisticated and adaptive will be their interaction with printed language" (Templeton, 1980).

As for programs designed to teach the structural elements of language, Allred claims that these have not been researched and evaluated thoroughly enough to permit firm conclusions about their effectiveness in building spelling proficiency. Isaacs and Stennett (1979) conducted a study of the Engleman-Becker Morphographic Spelling Program[1] and found that the spelling growth of program students was nonsignificant. These authors, moreover, questioned the accuracy of the claims made for the program by its developers. As more studies and evaluations are conducted, more information will become available about the effectiveness of programs which teach structural principles. In the meantime, most writers advocate the teaching of orthographic-linguistic relationships to older students as one part of the total language arts program. Nicholson and Schacter, Marino (1980) and others advocate that this instruction be set in context, by presenting word "families" (words that are similar phonetically, semantically, etymologically, etc.) so that structural principles can be discovered as well as specifically taught.

[1]Morphographic spelling is a direct instruction program for grades 4-12 which offers rules about the structure of English words and is intended to provide students the tools to spell virtually any English word.

Use of Nonstandard Orthographies. The history of the English language includes a number of attempts to reform the English spelling system so as to achieve a closer (or a total) phoneme-grapheme correspondence (Hodges). While few modern instructional theorists seek to promote spelling achievement by changing the English alphabet or English spelling, instructional practices have been used which offer beginning spellers a reliable phonetic alphabet for initial learning. Students, after gaining some reading and writing proficiency through the use of a predictable orthographic system, are gradually transitioned to the use of the standard spelling system in their language arts activities.

The best-known and most widely used of the nonstandard orthographies is the British Initial Teaching Alphabet (ITA). The rationale for ITA is that it permits children to learn to read more quickly and with less observable frustration than instruction using standard orthography. Proponents such as Mazurkiewicz (1964; 1978) further claim that ITA--which is both an orthographic system and an instructional program--permits children to write with much greater facility, promotes independent work habits, and results in superior language arts skills (including spelling) after the transition to traditional orthography. Gilooly (1966) and other writers, however, have refuted the positive claims made for ITA and have indicted this system for causing ongoing reading and spelling problems among those instructed with it. Passanante (1979) found that ITA neither enhanced nor inhibited the development of later spelling proficiency and, in reviewing the research on ITA, concluded that, "There is no clear-cut indication that i.t.a. provides a definitely superior system for reading instruction. The experimental data, so far, is [sic] inconclusive as to spelling skills, and there is some evidence that negative transfer may occur in children who have initially learned inappropriate spellings."

Although ITA instruction enjoyed a vogue in this country in the 1960s and 1970s, it is not much in evidence in American schools today, and because the current emphasis is upon discovering and teaching the structural principles underlying standard orthography, it is not expected that any nonstandard spelling system will be in widespread use in schools in the foreseeable future.

Research on Instructional Methods

By what methods should students be presented with the words they are to learn to spell? What words or categories of words should be emphasized? Should spelling be taught separately or be integrated with instruction in the other language arts? These and other methodological questions have been investigated--and sometimes hotly debated--for as long as spelling instruction has been delivered. This section presents a summary of findings concerning these issues organized according to the major controversies which have existed among educators past and present.

Word lists versus words in context. When students are to be presented with a group of new spelling words, should these be given in list form or should they be set in the context of sentences, paragraphs, short fables, etc.? Research past and present overwhelmingly supports the list format for initial presentation, whether the student is a small child just beginning to learn to spell, an older student in a remedial class, or an adult seeking to increase his or her spelling proficiency. This is the conclusion of Allred's review and of the review conducted by Fitzsimmons and Loomer; and it is corroborated by study results obtained by Cheek (1979), Ernest Horn (1960); Howley and Gallup (1922), Wallace (1972) and many others. It also appears helpful for the words presented to be related phonetically, semantically or etymologically (Cheek), so that students can begin to develop an inductive sense of language structures.

Some researchers have asked if word lists together with contextual presentations are superior to the use of word lists alone. The answer is yes, according to Templeton's review and Wallace's study. This finding is consistent with other findings to the effect that spelling skill is related to the volume and variety of contacts with language activities (discussed in greater detail later in this report). The focus of most of this research, however, has been to compare learning to spell from word lists with learning to spell words presented in context, and the use of word lists as the initial method of encountering new words is overwhelmingly favored. The word list method is also the most commonly used approach to presenting new spelling words and has remained so throughout the history of spelling instruction in the U.S. (Hodges).

Content selection. In colonial times it was not uncommon for spelling instruction to be characterized by instructional practices which, from our modern perspective, appear somewhat sadistic. The effort put forth to learn to spell was valued because it was thought to build character and to promote mental discipline/hygiene. Students were, therefore, sometimes required to learn to spell difficult words for no other reason than that the words were difficult. Nebuzaradum, Estremadure, Saxigesime and Abelbethmaleah were standard fare (Hodges). Competitions ("spelling bees") brought glory to those who mastered this content and humiliation (and sometimes physical punishments) to those who did not.

All this has changed enormously. Contemporary practice involves organizing initial spelling instruction around words which are frequently used in the language, and research and expert opinion indicate that this is the most effective approach to building spelling proficiency (Fitzsimmons and Loomer; Hollingsworth, 1978; Wenzel, 1977; Bloomer, 1961). These writers conclude that while it is important to call

attention to the orthographic regularity or irregularity of words studied, their frequency of occurrence in the language should be the main criterion for introducing them. Words which are useful to know, but less frequently used, should be part of the spelling program for older students, again regardless of their orthographic regularity, according to Goyen (1977). In his 1969 summary, Thomas Horn elaborated the concept of "frequently used" words, contending that since these do not differ much from one geographical area to another, it is not necessary to develop word lists on a local basis.

Integration of spelling with other language arts. Researchers and theorists generally agree that spelling should not be taught in isolation from the other language arts. While it has been demonstrated that proficient spelling is not dependent on knowledge of word meanings (Fitzsimmons and Loomer), few writers see any virtue in teaching students to spell words they don't understand and can't use. The spelling-only emphasis of the Morphographic Spelling program is, in fact, a major cause of the criticism it has received (Isaacs, 1979).

C. S. Beers and J. W. Beers (1980b) strongly advocate the integration of spelling with other language arts activities by, for example, drawing spelling lists from the material students are currently reading. Goyen urges the integration of spelling and vocabulary-building activities, and Mangieri and Baldwin (1979) insist that "Students shoud never be required to spell words they do not understand." Further support for integration of spelling with other language arts is found in the work of Lesiak and Lesiak (1979), Nicholson and Schacter; Templeton, Wenzel (1977) and Zutell (1978).

Initial emphasis--spelling or writing? Time was when great emphasis was placed on accurate spelling for the beginning speller. The literature on spelling instruction now favors encouraging primary children to write prolifically, without undue emphasis on spelling accuracy (Blair and Rupley, 1977; Cramer, 1976; Forester, 1980; Templeton, 1979, etc.). Children learn to spell from their involvement in specific spelling skill building activities, but they also learn these skills from exposure to the language and practice in using it. Hence, emphasizing creative writing and tolerating misspellings is advised along with other activities specifically directed at spelling skill development.

Systematic versus incidental learning. As referenced above, children develop spelling skills both by design and incidentally. While "support has been voiced for a purely incidental approach to spelling since the latter part of the nineteenth century" (Hodges), it should be obvious from the literature summarized thus far that the vast majority of educators and researchers favor the use of systematic spelling instruction. The support for incidental learning, such as it is, has come from two rather specious sources. One is the questionable reasoning that since much spelling skill development happens incidentally from exposure to the language, the provision of systematic spelling instruction is a kind of reduncancy. Hanna, et al., respond to this view with the contention that "spelling...needs to be taught separately in definite work sessions. We must not allow spelling to 'go by the board' in the sense of being casual or incidental; for proficiency in spelling is basic to success in all subjects where ideas must be expressed through writing." Some researchers (e.g., Hammill, et al., 1977) have found no outcome difference between older students who received instruction and those who did not. At least some of these studies have had design flaws, however, as when students

receiving remedial spelling instruction were compared with proficient spellers receiving no instruction.

The self-corrected test. Research has overwhelmingly shown that correcting one's own misspellings is the single most important factor in learning to spell (Ernest Horn, 1963; Thomas Horn, 1946; Rieth, et al., 1974; Gates, 1931; Allred; Fitzsimmons and Loomer. According to Horn:

> When corrected by the pupil and the results are properly utilized, the test is the most fruitful single learning activity (per unit of time) that has yet been devised. It helps students at all levels of spelling ability.... As a learning activity, to have each pupil correct his own paper is better than to have the pupils exchange papers or to have the teacher correct them.

This being the case, most researchers and theorists recommend that use of the test-study-test method, with unknown or persistently misspelled words receiving attention by way of proven study steps.[2] Ideally, students should correct their tests as soon as possible after taking them, and then be provided another opportunity to be tested on them shortly after the correction/study period. If the correction process itself is difficult for the student, help from the teacher needs to be provided (E. Horn, 1963).

Typewriters, computers and other aids. Research has shown that proficiency in spelling is related to the speller's ability to formulate and retain mental images of words, particularly those words which violate

[2]The following steps, or a very similar set, can be found in virtually all spelling books: 1) pronounce each word carefully; 2) look carefully at each part of the word as it is pronounced; 3) say the letters in sequence; 4) attempt to recall how the word looks and spell it to yourself; 5) check this attempt to recall; 6) write the word; 7) check this spelling attempt; 8) repeat the above steps if necessary. (Cited by Allred, 1977).

phonic principles. Studies involving the use of devices such as the typewriter or an "Imagetics" machine (which involves tracing words with a stylus) indicate that these aids can assist students to improve their visualization skills and, therefore, their spelling. The work of Bartholome (1977) and Singh (1977) has demonstrated that the typewriter can help students build spelling skills, especially if they are experiencing problems learning to spell and especially if they do not know how to type (and, thus, must work slowly and carefully). The Imagetics device used by Cabán (1978) proved "somewhat better" than either drill and practice or self-directed study, with the difference being attributed to its strengthening of visualization skills. Computer-assisted spelling instruction has also shown positive effects for spelling and other language arts activities (Rappaport and Savard, 1980), and has also been effective in accelerating student learning rate. All of these aids confer the additional benefits of increasing student motivation and of lending themselves to individualization. None of the writings examined call for replacement of traditional methods by mechanical aids; rather, they contend that such aids are valuable supplements to regular instructional methods.

The role of games. Spelling "bees" and other spelling games are nearly as old as spelling instruction itself (Hodges). There is general agreement among researchers that such activities can be helpful and that the way that they help is by stimulating student interest (Fitzgerald; E. Horn; T. Horn, etc.). Some cautions are offered, however, by those who have investigated the role of games in the overall spelling program. Writers emphasize that games, like mechanical aids, should have a supplementary role in the learning program, not a central one. Games, if

employed, should be meaningful and connected to the regular spelling program. Finally, it should be remembered that games are generally competitive in nature, and while competition generates interest and motivation among many students, it has been shown to affect achievement negatively among some groups, such as low-ability students (Cotton and Savard, 1981a) and Native American students (Cotton and Savard, 1981b).

Individualization. While some studies have found no differences when individualized spelling instruction was compared to another format, such as small group or whole class instruction (Crosland, 1955; Pflug, 1981), research has generally supported the use of individualized techniques (Allred, et al., 1964; Masoner, 1965, etc.). As in other curricular areas, individualization has different meanings and applications in spelling instruction. Many of the methods described thus far are implicitly individualized or "individualizable," though they were employed long before such terms were coined. The self-corrected test, for example, is described by Ernest Horn as "a happy instance where group instruction and adjustments to individual differences are combined." Programs employing aids can accommodate the individual student's needs as regards both content and learning rate. Perhaps the most fruitful form of individualized instruction is the language experience approach, wherein words and stories from each student's own language and experience become the curricular content for that student's learning program. As this applies to spelling, word lists are generated from the student's speaking vocabulary and from among the persistently misspelled words in his or her written work.

Time allocation. Larson, in his 1945 survey of the literature, found that, insofar as teachers err regarding the amount of time spent on spelling instruction, they err in the direction of spending too much time

in this area. Subsequent studies (Allred; Jarvis, 1963, etc.) have corroborated this finding and have been in agreement that one hour to seventy-five minutes per week is the optimum time allocation for most students. Additional time appears not to help, and may even begin to show a negative relationship to achievement, especially if the additional time is devoted to such activities as multiple writings of words missed. Cotton and Savard (1981c) surveyed the literature on time factors for learning in general and found additional allocations of noninteractive time (homework or seatwork) to be unproductive or counterproductive. It would appear that if teachers want students with spelling problems to spend extra time working on their skills, this time should be expended on teacher-student or student-student activities.

Ineffective Practices

Fitzsimmons and Loomer, in their extensive review/summary, included among their citations of research findings a list of those practices which research has shown to be useless or only minimally useful in fostering the development of spelling skills. Some of these have been referenced above in the context of discussions about practices which are effective. It may, nevertheless, be useful to present the Fitzsimmons and Loomer listing, as it includes a number of instructional approaches which, despite their lack of demonstrable utility, are commonly practiced in schools. The listing appears within a section called "Procedures in Spelling Not Supported By Research" and includes the following.

- Presenting words in syllabified form (as opposed to whole word presentation)
- Stimulating student interest in spelling chiefly through offering rewards
- Writing words several times (for initial learning or as part of correction)

- Relying heavily on phonic rules
- Having students study "hard spots" in words
- Studying words before attempting to spell them
- Individualizing time allocations
- Having students work out their own methods for learning to spell
- Writing words in the air
- Initially presenting words in sentence or paragraph form[3]

Divergence Between Research and Practice

Researchers such as Ernest Horn, Fitzgerald, Petty and others have examined the relationship between research-supported practices and classroom application and have reacted with alarm to the areas of disparity they have discovered. The largest-scale investigation of the research-practice relationship was conducted by Fitzsimmons and Loomer and published in their 1978 report. After conducting an extensive review of the research and other literature on effective instructional practices in spelling, these researchers developed a questionnaire which was completed by nearly 1,300 teachers of spelling. Findings from this survey were compared with findings from the research review effort. Many areas of disagreement were noted, both beteween what the teachers said they believed and what they said they actually did, and between either their beliefs or practices and the findings emerging from the literature on spelling instruction.

[3]The present author has not consulted all the evidence cited by Fitzsimmons and Loomer on ineffective practices. Readers are referred to their 1978 summary if pursuit of these sources is of interest.

They discovered, for example, that two-thirds of the respondents either disagreed with or were undecided about the advisability of presenting spelling words in list form. Research and practice were more closely aligned regarding support for the selection of frequently used words for spelling emphasis; 91 percent agreed and nearly as many put this into practice. Regarding the use of games and aids, teachers generally felt they were only somewhat useful, but most made use of them nevertheless.

Although the self-corrected test has been found to be the single most powerful spelling skill building strategy, only 35 percent of the survey respondents used this method routinely, and another 35 percent rarely or never used it. And nearly a third of the respondents disagreed with and didn't make use of the proven test-study-test method.

The above represent highlights from the findings on the research-practice disparity. Many more areas of disagreement are cited, and interested readers are invited to consult the original report.

Other researchers have called attention to the divergence of research and practice with regard to the development of spelling subskills or to spelling instruction as a whole. Thompson and Block (1979), for example, have pointed out that, while word recall has been shown to be a more powerful method than word recognition in building (and testing) spelling skills, recognition exercises are the major component or a major component of most programs. Cronnell and Humes (1980) were also concerned about the emphasis on word recognition in their analysis of seven commonly used spelling series.

Cronnell and Humes, Cronnell (1978) and Gentry (1979) have commented on the vast differences in program content noted among the major spelling programs currently in use. While most of these widely used programs are

similar in their early stages, considerable differences in content and sequencing are noted later on. Gentry observed that of a total of 240 spelling skills which can be tabulated from the program materials in seven major spelling series, only 93 are present in all of them. In addition to their concerns about the degree of match between proven practices and a given program's scope and sequence, these researchers have also drawn attention to the problem of administering standardized skill tests to students who have been instructed differently.

Summary of Effective Practices

This section is intended to provide readers of this document with a brief review and "ready reference" listing of effective instructional practices for spelling, as supported by research and by expert opinion:

- Phonics instruction is a valuable component of the overall spelling program when used in combination with whole word ("sight") methods.
- Teaching spelling rules is helpful up to a point; only those rules which apply to large numbers of words should be taught.
- Programs based on linguistic generalizations appear to be useful with older students, though this approach has not been thoroughly researched.
- Use of nonstandard orthographies has produced mixed results and is not recommended by most researchers and theorists.
- Presenting spelling words in list form for initial learning is more effective than presenting them in a narrative context; the combination of list and in-context presentation appears superior to either method alone.
- Spelling instruction should emphasize words which are frequently used in spoken and written language; program content for older students should include words which are useful, but less frequently used.
- Spelling instruction should be integrated with activities in the other language arts, especially for older students.
- Teachers should encourage primary students to do a great deal of writing and tolerate misspellings; spelling should be emphasized separately in specific skill-building activities.

- Spelling instruction should be systematic and ongoing, not incidental.
- The test-study-test method for learning to spell is superior to the study-test method.
- The self-corrected test is the single most powerful activity for promoting spelling achievement.
- Computers, typewriters and other aids can provide valuable supplementary learning activities, increase learning rate and stimulate motivation for many students.
- Spelling games are most effective as supplements when they are meaningful and clearly related to the overall spelling program.
- Individualized instruction has been shown to foster spelling achievement gains.
- Sixty to seventy-five minutes of spelling activities per week are appropriate for most students; many students require less time.

Whereas many reviews of educational literature conclude ambiguously and with an invitation to researchers to investigate the topic more fully, the situation with spelling instruction does not lead to such an open-ended statement. While there is certainly room for developers to plan and structure programs which will capitalize on what is known to be effective in teaching spelling, the major area of need seems to be to communicate to practitioners, convincingly, as it were, the validated methods and approaches they should use to foster spelling proficiency among their students. May the present summary assist in this effort.

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